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ABSTRACT

The California History-Social Science Project (CH-SSP), a legislatively-mandated professional development program is administered out of the University of California, Office of the President. The Executive Offices are based at UCLA, and oversee 17 local sites across California. As part of its mission, CH-SSP engages teachers in action research on the use of technology based discourse tools to support the development of a discipline based reflective thinking process, which promotes student ability to engage in historical thinking and understanding. This action research project grew out of a previous project in 1999 and 2000 in which teachers explored the uses of technology in K-12 history classrooms and developed lessons plans for statewide distribution. Although it was felt that the work which emerged from that project was of a high quality, teachers did not seem to be exploring the issues involved in technology and the classroom at the depth that the researchers were interested in. The program was modified in two ways. Instead of being asked to generate lesson plans, teachers were asked to engage in action research in the classroom. It was felt this methodology was more likely to get teachers to think about their teaching in a reflective manner. The second change was the stronger focus on online discourse tools. So in 2001, 26 teachers from across California conducted research in grade 3-12 classrooms with diverse student populations, low performing and ESL students. The collective results of these research studies were surprisingly uniform. Students, particularly low performing and ESL students, engaged in significantly higher levels of discourse than in the traditional classroom; and they were either learning to engage in or engaging in discipline based activities. The interaction of these two--discourse and activities--lead to higher levels of historical thinking and understanding, as reported by the teachers. This result was only true when the teachers provided scaffolding in the form of discourse supports. (AEF)

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# Towards a Discipline Based Reflective Thinking Process for K-12 Students and Teachers Through On-line Discourse and Action Research

**Elizabeth Wellman, Ed.D.**

## Introduction

The California History-Social Science Project, a legislatively-mandated professional development program is administered out of the University of California, Office of the President. The Executive Offices are based at UCLA, and oversee seventeen local sites across California. CH-SSP's mission statement includes: a commitment to improving the teaching and learning of history-social science by strengthening disciplinary content knowledge for all students as outlined in the California History-Social Science Content Standards; enhancing instructional strategies in the teaching of history-social science to promote accessibility to the discipline; promoting collaboration across grade levels, kindergarten through university; and enhancing teachers' use of technology as an integral part of the instructional process.

As part of meeting this mission, CH-SSP engages teachers in action research on the use of technology-based discourse tools to support the development of a discipline based reflective thinking process, which promotes student ability to engage in historical thinking and understanding. This action research project grew out of a previous project in 1999 and 2000 in which teachers explored the uses of technology in K-12 history classrooms and developed lessons plans for statewide distribution. Although we felt that the work which emerged from that project was of a high quality, we did not feel teachers were exploring the issues involved in technology and the classroom at the depth that we were interested in. We modified the program in two ways. Instead of asking teachers to generate lesson plans, we asked them to engage in action research in the classroom. We felt this methodology was more likely to get teachers to think about their teaching in a reflective manner. The second change we made is we focused much more, although not exclusively, on online discourse tools. The reason for this was from the previous program – the teacher in that program expressed interest in the use of these tools in the history classroom. So, in 2001, twenty-six teachers from across California conducted research in grade 3-12 classrooms with diverse student populations, low performing and ESL students. The collective results of these research studies was surprisingly uniform. Students, particularly low performing and ESL students, engaged in significantly higher levels of discourse than in the traditional classroom; and they were either learning to engage in or engaging in discipline based activities ('doing history'). The interaction of these two – discourse and activities – lead to higher levels of historical thinking and understanding, as reported by the teachers. This result was only true when the teachers provided scaffolding in the form of discourse supports.

## Purpose/Theoretical Perspective

The primary purpose of the professional development is to engage and support teachers to investigate instructional methods that support students' development of historical thinking and understanding through a discipline based reflective learning process, and to investigate using technology to support the instructional methodology in ways that could not be done without technology.

Fundamental to how we approach the professional development is our approach to history. We approach the teaching of K-12 history as a discipline as opposed to a subject (Stearn, 1993). As part of practicing history, historians engage in discourse about the discipline and in discipline based activities. We reflect this in the K-12 classroom. Discourse in the History/Social Science classroom supports students in externalizing thinking and in creating cultural supports for thinking (Bain, 1998). Discourse interacting with discipline based activities provides a basis for students to 'do the discipline' and engage in higher levels of thinking and historical understanding. For this to be successful, teachers must provide social assistance (scaffolding) to the learners to support the necessary competencies through which the historical thinking and understanding can emerge and be internalized (Vygotsky, 1978). There are many kinds of scaffolding that can be used. Technology based tools, and concomitant teacher supplied supports, are one kind of assistance (Salomon, 1988), which we focus on.

We model this approach with the professional development. We approach the teaching of history as a discipline. We engage in discourse with cultural supports to externalize the teachers' thinking. We use an action research model as it is an ideal vehicle to manifest this. Action research provides for inquiry through

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reflection, it brings the unconscious to a conscious level (Schon, 1993). The teachers' understandings can emerge and be internalized. And, once again, among many forms of scaffolding that are used, technology tools are used support this.

Interaction between discourse and action research are therefore, central to this professional development approach. We see discourse as a creative process in which a shared understanding is created (Bohm, 1996). To engage in discourse is to engage in both disciplines – history and education. It is reflective and iterative in nature. It involves social assistance and the use of tools. Scaffolding is provided by the professional developers (facilitators). Tools are non-electronic (small group discussion, writing) and electronic (email, bulletin boards, chat, threaded discussion, databased discussion, electronic annotation).

Action research is also a process. It is a way to engage with classroom teaching and bring more of it to a conscious level (Hopkins & Antes, 1990). It is reflective and iterative in nature. Reflection encourages the challenging of ones existing theories and preconceived views of teaching (Kettle & Sellars, 1996). Action research involves social assistance and the use of tools. As with discourse, scaffolding is provided by facilitators (coaches) and tools are both non-electronic and electronic.

As elements of both of these processes we engage in reflection, collaboration and inquiry.

**Professional Development Model**

We see our professional development model as a system of people, practices, and technologies. The human activities are served by the technology (Nardi & O'Day, 1998). Its parts consist of facilitators, teachers and students; the practices of discourse and action research, in the disciplines of history and education; and the supporting technologies.

Teachers participate in online pre-institute discourse activities, then spend three days at UCLA starting the research process (see below). Back in the classroom, they implement their action research. Finally, they write up their results for dissemination. In total, this is a five to six month commitment.

The action research process consists of six overlapping stages

- First, they question their assumptions about the disciplines. Through online discourse before the institute and in person discourse during the institute, the hidden assumptions that we all have are brought to the surface.
- Second, they pose a problem (research question). They will discuss these with the other teachers and give other teachers feedback on their problems.
- Three, as each teacher focuses on one problem, one aspect of their teaching, the plan for the solution should emerge (research plan) and worked out collaboratively.
- Four, they will implement the action research plan in their classroom.
- Five, both qualitative and quantitative data will be gathered by all teachers, analyzed and shared with peers to assure the highest level of reliability and validity possible.
- Six, the process and the results of the action research are documented, peer reviewed and disseminated.

The first three stages of this process are the most difficult for the teachers. Once they have a plan of action, implementing and following through on the plan has not posed too many problems. Because of this, and based on the research from the 2001 group, a proposed discourse/action interaction process has been developed as a scaffolding tool for the teachers through the action research process. This tool is used by the facilitators and can be used by the teachers in their own classroom. It is considered a tool-in-progress. With each iteration of professional development, it is anticipated that the tool will change in response to the teachers input and their experiences in the classroom. It is described in more detail below.

Other tools that both support the professional development and are the focus of the action research are primarily online. Blackboard was used as an online environment and we will be using it again. Within Blackboard, email, bulletin boards, threaded and non-threaded discussion, chat (and archived chat), posting

and annotation of documents, the development of individual pages, and annotated links and resources all provide discourse tools for the action research.

**The Discourse/Action Interaction** (see diagram at end of paper)
As part of their action research, teachers are asked to engage in instruction which leads to students engaging in a discipline based reflective thinking process. Although we believe that there are a number of major components to this process – at a minimum discourse, visual thinking and experiential thinking – at this time we are focusing on discourse. As professional developers we are asking our teachers to engage in the same discourse/action interaction and discipline based reflective thinking process. We believe it is crucial to this professional development program that the teachers engage in the same kinds of learning activities we are asking them to use with their students. We will go over the discourse/action interaction we are using as it would be applied in a K-12 classroom, and then we will discuss how this differs for the professional development program.

When we are considering the role of discourse in a discipline based reflective learning process, we focus on four major areas. The students should engage in a continuous **discourse/action** process where discourse leads to action which leads to discourse and so on. So discourse and the activities are two of the areas. The third area, **teacher provided supports**, reflects the teacher's role in the students process. The teacher supplies a number of scaffolds or supports to the acquisition of the reflective learning process. All of these three areas feed and support the fourth area – the **student reflective process**. So, students develop a reflective learning process through the interaction of discourse with activities and the judicious and considered use of supports from the teacher.

In their action research, the teachers focus more specifically on the kinds of discourse, the kinds of activities, how technology supports those and an exploration of what teacher provided supports seem to provide the most assistance, in what context, to which students. This past year the focus was on chat rooms, threaded discussion groups, bulletin boards and database based discussion. Generated by the teachers, they focused on the questions outlined below:

- Do these tools provide greater opportunity to engage in discourse? Does this result in historical thinking and understanding?
- Do the students engage in more discourse with the technology tools? Are they more motivated to engage in discourse? Does the type of discourse that technology provides facilitate deeper historical thinking and understanding than other forms of discourse?
- Does the technology interfere in any way with the discourse process?
- What does the teacher have to provide in the form of scaffolding tools to facilitate optimal discourse?

We have used the results of the teachers' work in these areas to expand on the four major areas in discourse/action interaction. Some work has been done on the area of online discourse tools. This has been summarized by Sherry (2000) in a thorough article available online. We have drawn from many of the ideas in this article and combined it with our experience with our teachers to structure an approach to thinking about discourse in the classroom. We ask our teachers to first consider the structure of the discourse which currently exists in their classroom. Typically this will reflect a teacher asks question, student answers question, teacher provides feedback format with some minor variations. It will also typically involve only 10 – 15% of the students and virtually no ESL or low performing students (from our teachers). We proposed going in the direction of teacher questions, students question, students answer, students/teachers support/share and students/teacher comments where these may not occur in any particular order. The teachers' role in this form of discourse is to support the student to create, share, negotiate, interpret, expand, justify, question, summarize, clarify, predict, extend, and so on. As the students expertise increases, there can be more of a focus on framing questions appropriately, expanding on valid propositions, students being open to critical review of their point of view, students sharing understandings, working towards a common understanding, common knowledge construction, and so on. The environment should be constantly evolving, yet be organized.

There is room for teachers to focus action research questions in nearly every area of the discourse/action

interaction. In particular, every teacher eventually gets around to exploring what kinds of teacher provided supports will best facilitate the discourse. As most of the discourse occurs in an online environment, the teacher support questions are not just about supporting discourse, but on how to use the technology to best advantage to support the discourse. These questions can range from – when do you use chat or threaded discussion? To what cultural implications are there to the introduction of technology on this scale in my classroom? This last question came up in post-research musings by the teachers last year. We will be tackling it in a more focused way with this years program.

The activity area of the discourse/action interaction involves discipline based activities – activities that are relevant, and authentic. These activities can be multidisciplinary, interactive, exploratory, performance based, involve advance skills, etc. These activities should interact with discourse activities in such a way as to enhance the development of both the new discourse process for the students and the process of developing the skills to 'do the discipline'.

As teachers think about the discourse/action interaction and develop their research questions, they will be themselves engage in discourse activities in the online environment. Here is the challenge for our facilitators. Many of these teachers do not have a well developed discourse process. We must provide the appropriate scaffolding to support these teachers in engaging in the process that they will be working with their own students to develop. Our research, other than reporting on the teachers' results, is to develop these scaffolds as the project progresses, and evaluate the results. The discourse/action interaction is one such scaffold. It is self-referential in this way – it scaffolds the teachers to help them scaffold their students by also using the discouse/action interaction.

**Examples and Results from 2001**

Teachers approached the implementation of the research in a number of different ways. The following three examples are illustrative of the projects as a whole.

At a high school near San Diego, CA, the participating teacher had a history class of 36 primarily ESL and low-performing students. He took advantage of a school with a block schedule to spend a 1.5 hour block for this class in the computer lab in a chatroom on Blackboard. All the students were still in the same room, but discussing history in a chatroom. This step alone allowed 100% participation from the students (instead of 15% in a traditional classroom). He then followed this discourse up with a 1.5 hour activity where the students wrote about their ideas. A higher level of historical thinking was evidenced in their writing. The most promising result however, were the gains made over time in the ability to write in English for these ESL students.

At a middle school near Riverside, CA a participating teacher used threaded discussion to supplement the classroom activity. At first, without adequate teacher supports, participation was poor and the level of the discussion was low. He instituted several teacher provided supports, such as more detailed instructions on writing entries, and he provided immediate (24 hours) and explicit feedback to the students. The results were an increase in participation (not quite 100%) and more thoughtful contributions. He found that a particularly useful byproduct of the use of the threaded discussion was his ability to diagnose and address misconceptions and preconceptions much more quickly than he could in the classroom.

At a middle school in Santa Monica, CA, a participating teacher developed her own database for student responses to open ended 'thought' questions on history. As each student responded to the question, they could also read the responses other students had entered. They can then respond to other students, develop arguments, which combine other student's points of view, or refute a student's point of view. She provided both discourse and content supports within this environment. Both motivation and participation increased dramatically over the traditional method. She was surprised at the level of participation from students who literally did not participate in any other way. She also found unexpected gains with her ESL students in their writing skills.

The following results were seen in every teacher's research study.
For teachers:

- The development of and use of discourse supports embedded in the classroom environment (technological and non-technological) was critical to promoting optimal engagement in the

technology-based discourse activities.

- Increased opportunity to diagnose and correct misconceptions.

For students:

- Motivation to participate in technology-based discourse activities was much higher than to participate in non-technology discourse activities.
- Non-technology discourse activities were positively affected, both in the level and amount of participation.
- Low-performing students showed the greatest gains in both participation and understanding.
- English as a Second Language learners benefited significantly. Their interest in participating, their ability to express ideas and their writing skills all showed more than expected gains.
- Students who had previously excelled at non-technology based discourse were the least enthusiastic.
- Nearly 100% of students voiced their opinions, received feedback and responded to others' opinions.
- A significant percentage of students used historical thinking and understanding including citing historical fact, comparing differing primary sources, questioning others' interpretations, and citing each other.

In addition, many teachers had results from their research that weren't addressed in the other research studies. These included:

- Students did not adhere to 'clique' boundaries when using technology-based discourse tools.
- Students were using the tools to expand discussions beyond the classroom.

Discourse is an important methodology in History/Social Science classrooms. The traditional forms of discourse are the classroom discussion and the small group discussion. Teachers find that both of these forms are limited. The teachers who participated in this research believe that less than 15% of their students participated in these. The research these teachers conducted indicates that the use of technology-based discourse tools seems to increase both the participation in (to nearly 100%) and the level at which students are engaging in historical thinking and understanding. This increase gives the teacher a solid foundation on which to make the change from history as a subject which teachers teach and students take, to a discipline, where historical thinking and understanding are core processes.

This year, by providing more support in the form of the discourse/action interaction, we hope that teachers will be able to form more focused questions than they did last year and concentrate more specifically on issues such as the appropriate use of various forms of teacher provided support for different students (ESL and low-performing, in particular) different technologies, and different pathways to the development of a new discourse process for the students.

**Conclusion**

This is an action research project. As such, it has yielded rich information on the use of discourse and the use of technology to support discourse for the advancement of student historical thinking and understanding in History/Social Science classrooms. It is the intention of all the teachers in this project that action research on these issues, and on the issues that these studies brought up, be continued. It is also the hope of all the teachers' that a more formal treatment of these issues will be pursued within the professional community.

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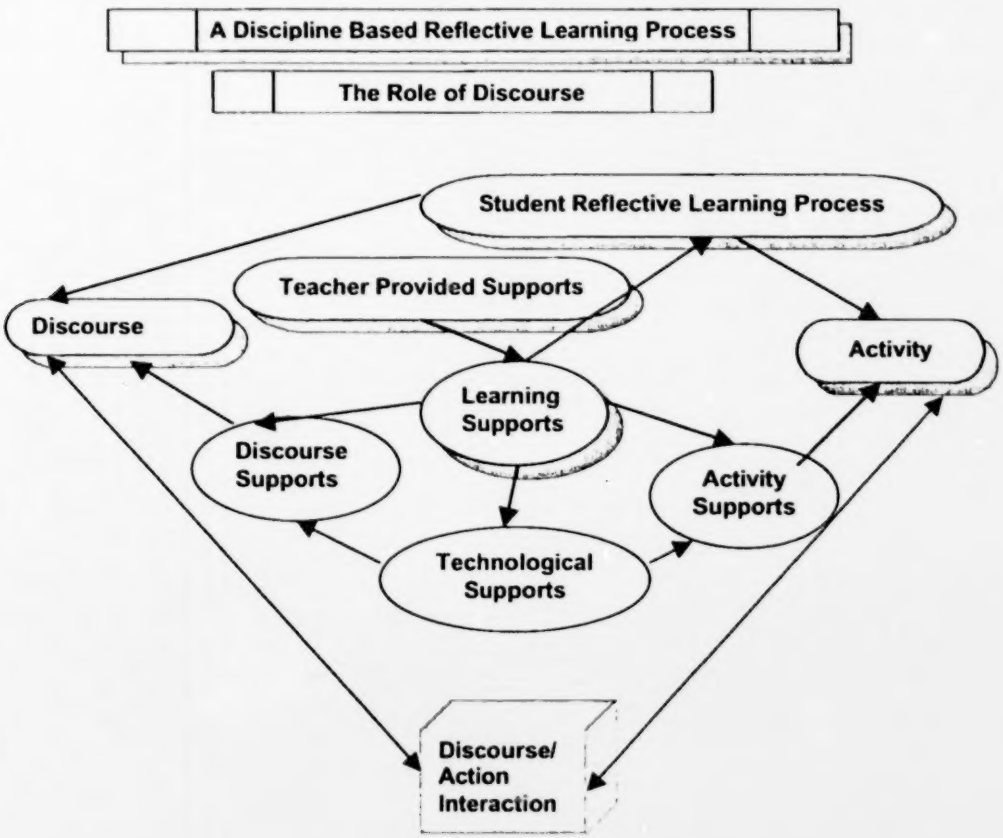




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